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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/566,557

06/29/2006

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04836000020NP

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27572 7590 02/24/2009  
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EXAMINER

MARCANTONI, PAUL D

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

02/24/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/566,557	<b>Applicant(s)</b> GIESEMANN, HERBERT	
	<b>Examiner</b> Paul Marcantoni	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/31/06</u> .   | 6) <input type="checkbox"/> Other: _____                          |

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35 USC 102/103:

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-18 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over DE 3923284 C1 (Gieseman-from PCT Int'l Search Report-Y reference), Maikuma (Y reference from PCT Int'l Search Report), Kaneko et al. '161, Dainippon (JP 58099157 abstract), Yamada et al. (JP '624 abstract), Katayama (JP '311 abstract), or Iwata (JP '185 abstract).

Full faith and credit were taken for the PCT examiner's search and indication of Y references meeting applicants' claims. These references were explained in the international search report as to how they meet applicants' claim limitations.

Kaneko et al. '161 teach a foam comprising water glass (sodium silicate) and aluminum hydroxide in amounts overlapping applicant's instant invention with density of 0.6 to 0.7 g/cm<sup>3</sup> (600 to 700 kg/m<sup>3</sup>). Further even if not anticipated control of the amount of water glass and Al hydroxide would appear to be within the control and obvious to one of ordinary skill in the art.

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Dainippon (JP '157) teach a composition comprising water glass and aluminum hydroxide used to make a foam product having a density of 0.3 g/cc which is the same as  $300 \text{ kg/m}^3$  and thus within applicants' claimed range anticipating applicants' instant invention. Even if not anticipated, overlapping ranges of amounts would have been prima facie obvious to one of ordinary skill in the art. Note that though this composition uses other components applicants use open claim language in comprising which fails to exclude unrecited or unclaimed components. "Comprising leaves the claim open for the inclusion of unspecified ingredients even in major amounts. Ex parte Davis et al., 80 USPQ 448 (PTO Bd of App.1948).

Yamada (JP '624 abstract) teach an inorganic foam comprising water glass and aluminum hydroxide and a final density of 0.4 g/cc or  $400 \text{ kg/m}^3$  which thus anticipates applicants' invention. Even if not anticipated, overlapping ranges of amounts would have been prima facie obvious to one of ordinary skill in the art. Yamada also teach fillers which can be any other material such as asbestos. Applicants do not specify the identity of the specific fillers in claim 1 (they originally did but deleted them out) and thus any filler can meet applicants' claim 1. While it is true that the claims may be read in light of the specification (their desired filler components), it is improper to read the limitations of the specification into the claims. In re Yamato, 222 USPQ 93; In re Wilson, 149 USPQ 523; Graver Tank v. Linde Air Products Co. 80 USPQ 451 (Supreme Court).

Katayama (JP '311 abstract) teaches a foam comprising water glass and Al hydroxide as well as fiber (can be filler) or diatomite (can be filler) with a specific gravity

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of 0.3 (and thus density of 0.3 g/cc or 300 kg/m<sup>3</sup>) thus anticipating applicants claims. Even if not anticipated, overlapping ranges of amounts would have been prima facie obvious to one of ordinary skill in the art.

Iwata (JP '185 abstract) teach a foam comprising Al hydroxide and sodium silicate in amounts overlapping applicants instant claims and achieves a density of 0.1 to 0.9 g/cc which is 100 to 900 kg/m<sup>3</sup> thus anticipating applicants' claims. The filler can be any other additive other than the mentioned components and thus meet the limitation of applicants' claims. Further, even if not anticipated, overlapping ranges of amounts would have been prima facie obvious to one of ordinary skill in the art.

Finally, the following references have been cited of interest:

Kudoh (US 2005/0263744 A1) teach in claim 1 a foam porous body made by mixing Al hydroxide and sodium silicate (water glass) to obtain a bulk density of 10 to 100 kg/m<sup>3</sup> which is within applicants' claimed range (see also paragraphs [0061] and [0063] which teaches a "mixture" of these components). It would appear that this reference cannot be used since applicants' instant invention pre-dates it.

Rao (US Patent No. 3,743,601) teach a composition in Examples II, V, and VI that has sodium silicate and Al hydroxide to make a foam. However, the density would appear to low as 2 to 8 lb/cubic ft. translates to 32 to 128 kg/m<sup>3</sup> which is below applicants minimum bulk density of 200 kg/m<sup>3</sup>.

Niedner (US Patent No. 6,497,945) also teaches a foam comprising alkali silicate (e.g. sodium silicate or water glass-claim 1) and Al hydroxide (claim 3) and filler but the

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density is still below applicants' claimed range since 0.04 to 0.1 g/cc translates to 40 to 100 kg/m<sup>3</sup>.

35 USC 112-Second Paragraph:

Claims 1-18 are rejected under the second paragraph of 35 USC 112 for failing to particularly point out and distinctly claim applicants' instant invention.

Th term "highly" is relative and indfinite in claim 1 preamble and any other claim preamble used (the word highly before refractory). Please delete "highly" wherever it is used.

The "use of" claims 5,6,9,10,14,15, and 17 are all indefinite. It is also not a proper statutory class of invention under 35 USC 101. Applicants can correct by making the claim ---A method of using--- claim. Note that these claims thus are also rejected under 35 USC 101 until they are corrected.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Marcantoni whose telephone number is 571-272-1373. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Paul Marcantoni/  
Primary Examiner, Art Unit 1793